

CLAIMS

What is claimed is:

1. A closed, pressurized delivery system for injection of in-situ remediation compounds such as slurries, stimulants, nutrients, biological cultures, colloidal suspensions, oxidizing agents, reducing agents and mixtures of compounds to underground, contaminated matter, comprising:

a first liquid diaphragm pump connected to an inflow source of water, said liquid diaphragm pump being in fluid communication with a plurality of bioslurry tanks connected in parallel with said first pump, said bioslurry tanks each having a drain for discharging an injectant therefrom;

valve means located between said first liquid diaphragm pump and each of said bioslurry tanks for controlling either the individual or simultaneous flow of fluid from said first pump to each of said bioslurry tanks;

a second liquid diaphragm pump having an inlet port for receiving the combined flow of injectant from said bioslurry tank drains, the second liquid diaphragm pump having an outlet in fluid communication with a system discharge port; and

a source of compressed gas in valved fluid communication with said system discharge port whereby an injectant is discharged therefrom under pressure.

2. The delivery system of claim 1 further including an injection rod in fluid communication with said total system discharge port for the delivery of remedial fluids to underground soils.

3. The delivery system of claim 2 further including a gas pressure line leading from

1 said source of compressed gas to said system discharge port, the line also being in separate
2 valved fluid communication with each of a plurality of feed tanks for storage of injectant under
3 pressure, said feed tanks each including a separately valved exhaust port in fluid communication
4 with said system discharge port such that the source of injectant, by operation of the exhaust port
5 valves, can be changed from one tank to another without loss of delivery pressure.

6 4. The delivery system of claim 3 wherein each of said feed tanks is in fluid
7 communication with said pressure lines such that each tank may be individually pressurized.

8 5. The delivery system of claim 4 wherein said source of pressurized gas is
9 delivered by a mechanical compressor.

10 6. The delivery system of claim 4 wherein said source of pressurized gas is a stored
11 compressed gas source.

12 7. The apparatus according to claim 1 wherein the liquid diaphragm pump, bioslurry
13 tanks, compressor, diaphragm pump and feed tanks are mounted in a mobile trailer such that an
14 entire functional closed injection delivery system may be transported as a unit.